

Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A method of oligomerizing olefin, comprising:
removing oxygenated hydrocarbon from an olefin stream containing at least one C₂ to C₁₂ olefin to obtain an olefin feed stream comprising less than 1,000 ppm by weight oxygenated hydrocarbon; and
contacting the olefin feed with an acid based oligomerization catalyst to oligomerize the olefin in the olefin feed.
2. (Original) The method of claim 1, wherein the acid based oligomerization catalyst is a solid phosphoric acid catalyst.
3. (Original) The method of claim 1, wherein the acid based oligomerization catalyst is a zeolite oligomerization catalyst.
4. (Original) The method of claim 3, wherein the zeolite oligomerization catalyst is selected from the group consisting of TON, MTT, MFI, MEL, MTW, EUO, ZSM-57, ferrierites, offretites, ZSM-4, ZSM-18, ZSM-23, Zeolite Beta, faujasites, zeolite L, mordenites, erionites and chabazites.
5. (Original) The method of claim 4, wherein the zeolite oligomerization catalyst is ZSM-22, ZSM-23 or ZSM-57.

6. (Original) The method of claim 5, wherein the zeolite oligomerization catalyst is ZSM-22 or ZSM-23.

7. (Original) The method in claim 6, wherein the zeolite oligomerization catalyst is a selectivated catalyst.

8. (Original) The method of claim 1, wherein the olefin feed contains less than 50 wt % alkane.

9. (Original) The method of claim 8, wherein the olefin feed contains at least 50 wt % olefin.

10. (Original) The method of claim 1, wherein the olefin stream is obtained by contacting oxygenate with a molecular sieve catalyst.

11. (Original) The method of claim 10, wherein the oxygenate is methanol or dimethyl ether.

12. (Original) The method of claim 1, wherein the olefin feed is hydrated prior to contacting with the acid based oligomerization catalyst.

13. (Original) The method of claim 12, wherein the hydrated olefin feed has a water content of 0.05 to 2 weight percent.

14. (Original) The method of claim 1, wherein the olefin feed stream comprises greater than 5 ppm by weight oxygenated hydrocarbon.

15-53. (Cancelled)

54. (Original) A method of oligomerizing olefin, comprising:
providing an olefin feed stream comprising at least one C₂ to C₁₂ olefin and oxygenated hydrocarbon, wherein the oxygenated hydrocarbon is provided in the olefin stream at a concentration of greater than 5 ppm by weight and less than 1,000 ppm by weight; and
contacting the olefin feed with an acid based oligomerization catalyst to oligomerize the olefin in the olefin feed.

55. (Original) The method of claim 54, wherein the acid based oligomerization catalyst is solid phosphoric acid catalyst.

56. (Original) The method of claim 54, wherein the acid based oligomerization catalyst is a zeolite oligomerization catalyst.

57. (Original) The method of claim 56, wherein the zeolite oligomerization catalyst is selected from the group consisting of TON, MTT, MFI, MEL, MTW, EUO, ZSM-57, ferrierites, offretites, ZSM-4, ZSM-18, ZSM-23, Zeolite Beta, faujasites, zeolite L, mordenites, erionites and chabazites.

58. (Original) The method of claim 57, wherein the zeolite oligomerization catalyst is ZSM-22, ZSM-23 or ZSM-57.

59. (Original) The method of claim 58, wherein the zeolite oligomerization catalyst is ZSM-22 or ZSM-23.

60. (Original) The method of claim 59, wherein the zeolite oligomerization catalyst is a selectivated catalyst.

61. (Original) The method of claim 54, wherein the olefin feed contains less than 50 wt % alkane.

62. (Original) The method of claim 61, wherein the olefin feed contains at least 50 wt % olefin.

63. (Original) The method of claim 54, wherein the olefin stream is obtained by contacting oxygenate with a molecular sieve catalyst.

64. (Original) The method of claim 63, wherein the oxygenate is methanol or dimethyl ether.

65. (Original) The method of claim 54, wherein the olefin feed is hydrated prior to contacting with the oligomerization catalyst.

66. (Original) The method of claim 65, wherein the hydrated olefin feed has a water content of 0.05 to 2 weight percent.